

The Future Commons 2070: the ethical problem of the territorialization of the North Sea.

Charlotte Geldof, director of the non-profit collective magnificent surroundings.org, a design-based research team on socio-spatial issues, Ghent, Belgium
Nel Janssens Chalmers University of Technology, Department of Architecture, Gothenburg, Sweden & KU Leuven, Faculty of Architecture, Campus Sint-Lucas (LUCA), Brussels, Belgium.

1. The hunger for land

As commonly known, the largest part of our planet (about 70 %) consists of water, seas and oceans. Mankind lives on the other 30%, which is land. Although water is not the natural habitat of us humans, we have always been attracted by it. We have built their living environment, in particular cities, at riverbanks and most of all at coastlines, bordering between land and sea. Being physically and biologically land-creatures, we need land to survive and we have always displayed a hunger for land to establish and constantly re-affirm our existence on earth. This resulted in dynamics of territorialization ranging from the cultivation of wild nature over colonization and urbanization to wars over land and resources, a continuous redrawing of borders defining man's territory. This hunger for land has also redrawn the border between land and sea. Since ages we have pushed the flood line back by means of dykes and de-poldering to win land from the sea in order to enlarge our biotope. Nowadays however, extremely sophisticated engineering and technological innovations create the possibility for a whole new dimension and scale of such land win operations, especially on oceans and seas. In this light, we plea for an ethical debate on spatial planning, more specifically on marine spatial planning, a branch of planning which is growing rapidly.

1.1 The need for land versus hunger for land

Winning land on the sea or land reclamation has become booming business. Coastal areas have always attracted people. Today about half the world's population lives within 100 km of water. René Kolman (2012), Secretary General of the International Association of Dredging Companies, sees two main reasons to argue for gaining new land on the seas and oceans: lack of space for a growing population and ensuring economic growth. The rising world population and the economic attractiveness (harbors, tourism...) of the coastal areas to allocate new populations and the (alleged) lack of space are frequently posted as the main reasons to look towards the seas and oceans to find new territories by expanding land onto sea (artificial islands, land reclamations, land extensions...). Since the '70 until now we witness worldwide an increasing amount of realizations of land reclamations. Different spatial-economic programs are organized in this new spaces gained on the sea: airports (Singapore's Changi, Hong Kong's Chek Lap Kok and Japan's Kansai airport), harbor extensions (first and second Maasvlakte Rotterdam, Singapore's extensions on Jurong Island and recent expansion projects on Tuas), urban expansions (Beemster, Haarlemmermeer, Flevoland, IJburg-Amsterdam), touristic and recreational infrastructure (the Maldives next to Male, new island called Hulhumale, Dubai, Florida), etc.. Today, with the growing blue energy, we find projects even of energy-storage islands (FOD VVV Leefmilieu, 2014a, FOD VVV Leefmilieu, 2014b).

But why do we want to claim parts of the seas and oceans to resolve this spatial planning programs which are actually land-bound? Is there a real lack of land or do we merely choose the path of least resistance? Land reclamation has become a huge economic driver, offering relatively cheap land and hence providing an easy way out of complex planning issues by locating difficult programs away from the already built up areas (the so-called NIMBY syndrome). Couldn't we rather look at the existing land and try to organize this better to cope

with challenges as new population densities, instead of expanding on marine spaces? This is foremost an ethical question. Seas and oceans to a large extent still have the character of being common to mankind. They are not characterized by the same kind of territorialization and ownership structure that is typical to land. Planning land-like infrastructure on sea results finally in transposing the same ownership and territory logics to the sea and hence, weakens the 'common-pool resource' the sea and oceans still are. The sea has this unique value to society: common interest. Everybody has the right to use the sea, to enjoy its benefits. Just like forests, water and the atmosphere, the sea can be considered as a 'common-pool resource', a natural common resource, quasi-free for anybody to enjoy. This is why the sea needs to be properly managed as a valuable common good.

2. Introducing the idea of commons-based marine spatial planning

In 2011, the collective of independent researchers 'magnificentsurroundings.org', led by Charlotte Geldof, published the 'Future Commons 2070, Map C01 Harwich to Hoek van Holland and Dover Strait' (fig 1 - 2) (Geldof et al, 2011). This map is a first, tentative attempt at developing a critical vision, introducing the commons as leading principle for marine spatial planning in this part of the Southern North Sea, the coastal area and the polders. The Future Commons 2070 is a design-based research into an updated concept of commons and aims to inject the debate on marine spatial planning with a new impetus, stirred by a socially-ecologically inspired basic principle. It starts from the observation that the seas and oceans, being an immense open space on earth, are increasingly under pressure. The increasing rate of land wastage is just one of the factors that will cause the demand to make open sea-space available for development ever more urgent. Quite soon, if not already, we will be witnessing nothing less than a form of colonization of the sea, the reclamation of extra space for extra (economic) development.

In spite of all kinds of exploitation already happening, the sea still kept a strong commons character. If we now start to treat this water-space as if it was land-territory, if we start to apply principles of land-planning to the sea, we risk that the sea will quickly lose its strength as common pool resource. Throughout the centuries, maritime law has kept on connecting ever-larger maritime areas with their adjacent coastal states, and this is an ongoing trend. By issuing its 'Law of the Sea' in 1982, the United Nations has allocated sovereign rights and obligations relating to the first 12 nautical miles of 'territorial sea' and the next 12 nautical miles of 'contiguous zone' to coastal states worldwide. Beyond the outer limit of these zones, 'exclusive economic zones' (EEZ) have been designated, which run to an outer limit set at maximum 350 nautical miles into the sea measured from the land/sea limit (baseline). Within these EEZ, coastal states have been allocated certain rights and obligations of research, exploitation, maintenance and management of natural sources found within the head of water, on the seabed and in the upper subsoil layer. At the moment, about 30% of the surface of oceans and seas on earth is situated within the EEZ of a sovereign coastal state, and the impact of this EEZ-status on a global level is strategically important. Those parts of seas and oceans located just outside these three delimited areas are called 'international waters' or 'high seas'. These remaining 70% are (to put it simply) intended for collective use; this part can be defined as a collective space on a worldwide scale. However, a collective status that has not been allocated or recognized explicitly is all too often demoted to the vulnerable status of 'freely available'...(Geldof et al, 2011) Filip De Rynck (2007) refers in this respect to what Elinor Ostrom (1990) calls the 'tragedy of the commons'. The lack of some kind of 'ownership' and moreover, some kind of responsibility for collective goods, makes it very hard to manage them. De Rynck states that the sea is a common with many users and many 'inhabitants', without a clear 'owner' and situated in a very fragmented institutional landscape. The sea crosses many governmental borders and a broad range of stakeholders act upon certain parts of the sea. For some aspects rules are developed but often independent from each other, for other aspects there are no rules at all and the use is

free (De Rynck, 2007). This problem of the commons, in our view, needs to be put central in marine spatial planning.

Clearly, marine spatial planning is on the rise worldwide. Policy concerning this matter is evolving steadily. While Europe is setting out the basic outlines for its future marine and maritime policy options, project developers are already proposing their first initiatives. The allocation of parts of the sea (the head of water, the seabed, the upper subsoil layer) with the belonging living and non-living natural elements to the sovereignty of nation states is, as explained above, a historically grown process (Geldof, 2009). Without a regular ethical evaluation, this trend could pursue and evolve into a partly privatization of strategic parts of the sea and our common pool resource, something which has already happened on land. In order to avoid this, we plea for a commons-based marine planning that aims at securing the sea as a common good and guarantees consolidation of its social, economic, environmental and spatial significance in a dynamic whole. In addition, establishing additional commons on land - inland extensions of the sea - will create opportunities and favorable conditions for managing the effects of climate change in coastal zones. This commons-based marine spatial planning (CB-MSP) centers on three basic rules of conduct. These will be elaborated in the following sections (3, 4, 5).

Figure 1: The Future Commons 2070, Map C01 Harwich to Hoek van Holland and Dover Strait (Geldof et al, 2011).



3. Mind the sea! - rule of conduct CB-MSP n°1

The sea deserves due care and there is a need for a global vision on how planning should be conducted here. 'Planning' for the most part implicates accepting development, which, in terms of spatial use, translates as 'appropriation of extra space'. But Europe's intention to guarantee economic growth in a climate of sustainable development sounds a lot like its credo for planning on land, whereas planning and designing for marine areas is in fact a very different, location-time-specific matter. If we are prepared to validate this specificity, it seems more than probable that for marine spatial planning, different planning principles from those for landlocked projects will be required. The first principle (rule of conduct) therefore is that each planning activity should start with an inquiry into the necessity to organize a new function on the sea and parallel, an inquiry into the feasibility to organize it on land. In other words, is it a matter of need for land or hunger for land? Are the arguments to develop something on the sea ethically (socio-ecologically) inspired or rather opportunistic?

This is not a matter of being overly moralistic. On the contrary, it concerns the first principle of sustainability which is being cautious and mindful with regards to effects of our actions we cannot fully predict. The seas and oceans are for a large part still unknown territory. Water-life and its related eco-systems are still a mystery in many respect. Hence, we cannot be sure how far-reaching, disturbing and possibly irreversible the consequences of our actions might be. We know that already today we have caused immense damage to the oceans and seas (plastic pollution...) because we tend to consider the sea and oceans an easy, nimby-like dumping place. But this huge water 'reservoir' actually lays at the base of our very origins and makes the earth inhabitable for mankind. Fishery and aquaculture today provide a living for approximately 540 million people (Unesco 2010). The resources and industries present in marine and coastal areas represent over 5% of the global GDP and constitute worldwide an important economic factor. On top of that, the oceans have a crucial not market oriented role in climate regulation, carbon sequestration, habitats, biodiversity etc. However, today 40% of the oceans worldwide is severely affected by human activity and unsustainable management. Unesco (2010) reports that this major natural resource is threatened and recommends to gather knowledge, distribute this knowledge widely, develop marine spatial planning, enhance the sustainable development of coastal and sea areas en to pay more attention to our submarine heritage (Geldof, Janssens, 2014).

Also on the European level these concerns have become important. In March 2013 the European Commission proposed legislation concerning a common frame for marine spatial planning and an integrated management of coastal areas. Each EU-country can still plan its own maritime activities but the local, regional and national planning in common waters has to be better coordinated according to minimum requirements. The current proposition of the EU directive aims to establish and execute marine spatial plans and strategies that implement an integrated coastal management that is based on an eco-system approach. This eco-system approach has to enable co-existence and prevent conflicts between competing sectoral activities in marine waters and coastal zones. The proposal is not yet ratified. (Geldof, Janssens, 2014) This shows that the themes that The Future Commons 2070 project formulated already in 2011, i.e. marine spatial planning and eco-system approach, have now become more actual than ever. The Future Commons project links the ecological issue closely to the issue of the commons, which is ultimately an issue of social responsibility and leads to the second rule of conduct.

4. Strengthen the commons - rule of conduct CB-MSP n°2

If after checking rule n°1 it turns out that a new function indeed needs to be planned on sea, the second rule says that the common character of this new function should be guaranteed. This implies in first instance that the quality of the sea as natural common pool resource cannot be affected. Just like forests, water and the atmosphere, oceans and seas can be considered as 'free' natural common resources. As they are exhaustible, common-pool resources are sensitive to problems like pollution, spillage and overuse. This is why the eco-system approach is of fundamental importance when administering the sea as a valuable common good. Hence, the first question is whether the planned function respects the marine eco-system and serves the common good of society? The overall aim is to strengthen and enhance the commons and to stop any further land-like diminishing of the commons through privatization (territorialization, further parceling out), exhaustion and pollution. Such a commons-based marine spatial planning requires a transnational approach. Transcending the existing state structure will allow the implementation of an international, coherent land, water and seas policy. Therefore, the 'Future Commons 2070' project advocates conservation of the sea as a common and recognition of its growing importance, strongly regulated by the European Union. Starting from the conviction that a relation exists between overexploitation of natural resources and the current use and governance of oceans and seas, we propose that the governance of all EEZ on a global scale should be reconsidered with this reflection in mind. We are proposing 2070 as the target year by which EEZ worldwide will convert into 'marine commons'. In accordance with this future vision, these marine commons will be administered with a view to putting the common good at the top of the agenda, meticulously striving for a more balanced use of natural resources and respect for the dynamics and evolution of nature and species in oceans and seas. Hence, we propose to bring the former EEZ, including the 'contiguous zone', under the government of the European Union and consequently to divide it into larger, supra-national natural-jurisdictional parts, based on its constituent ecosystems. Within a coordinating European policy framework, the territorial zone remains to be administered regionally. Anno 2070, the former EEZ have evolved to become the European Maritime Commons Zone (EU-MC), administered by the European Union, in accordance with policy based on 'limits to growth'. Regulations against overfishing, loss of biodiversity, a significant shifting of fishing grounds caused by climate change and strict European standards have ultimately led to a scale down in fishery. Temporal and geographical restrictions were also imposed on ecological fish farms, and some oyster banks were established. As sand and gravel became increasingly scarce, exploitation of raw materials has been restricted. Aided by heightening general interest in the environment and successive economic crises in the first decades of the century, this scarcity has led to a strict European mining policy. Anno 2070, mining activities are only permitted for those purposes for which no re-use alternatives have been found. The offshore windmill parks from the 2010's-20' have been interconnected and connected by the North Sea Ring to the European Low Carbon Super Grid. Production units for the generation of renewable energy have been maximally concentrated and interconnected and are now combined with, among other things, sea-farms, work and monitoring platforms, transformation and connection platforms. In our world of global networks, shipping routes are being adapted constantly. Experiments have been run with floating 'Intermediate HUB-terminals' that will enable the European port infrastructure to accommodate super ships using renewable energy. This makes further extensions to existing inland ports or sea harbours redundant.

The 'Future Commons' project thus pleads for the conservation and an increasing importance of the sea as a common strongly regulated by European policy. The starting point is a conviction that preservation and development of commons are essential in order to support positive societal evolution and to meet challenges such as climate change, migration toward coastal areas and energy demands. Earlier research into commons as they were in 2010 led us to a definition and classification of commons on a regional level and a method for mapping commons (Geldof et al. 2011). The map of commons in 2070, which is based on

research of the existing commons (natural, community and cultural commons according to the classification of Peter Barnes (2006)), provides a vision of a potential evolution of commons over the coming six decades.

5. See to low and temporary impact - rule of conduct CB-MSP n°3

The sea is an exceptionally dynamic environment. Its growing appeal and its increasingly intensive use have prompted us to set out a number of preconditions necessary to preserve its uniqueness as a common, as described in the above. A broad range of novel uses (recreation, production units for marine culture and for generating renewable energy, anchorage for port activities and navigation) has appeared in addition to more traditional uses of the sea such as navigation, fishery, shipping, transport and mining. All of these have to conform to tight restrictions in order to safeguard ecosystems and to preserve the commons. Therefore, the first two rules of conduct were proposed.

The third rule emphasizes time as the sea's fourth dimension and stipulates that all new programs should be conceived of as temporary, reversible, reusable and/or suitable for multipurpose use. As such, all spatial constructions connected with the planned activities are, by necessity temporary, floating structures, built in such a manner that they have zero negative impact on the marine environment and their ecological footprint remains low. Technological ingenuity is a crucial factor in meeting these preconditions for preserving the commons. In the territorial part of the North Sea, a strong concentration of diverse coastal area functionalities, marine functionalities and vulnerable ecosystems has by necessity led to the replacement of the existing location driven regional planning by time driven spatial management. It is crucial to the implementation of such time driven spatial management that continuous, intensive monitoring and adequate empowerment of users of this large-scale common is set in place.

Figure 2: Excerpts from the Future Commons 2070 map (Geldof, et al., 2011)

Fig. 2a) Vision on the future partitioning of the juridical EU zones on seas and oceans: proposal for Maritime EU Commons 2070.

Fig.2b) Scale bare of densities of the commons with gradations of black proportionate with the presence of commons. The blacker the surface, the more commons are established in that area, the whiter, the less commons are present, at this scale.

Fig. 2c) Extract: commons on land, commons on the maritime coastal zone, commons at sea / 2070

Fig.2d) New commons 2070: living to the rhythm of the sea in the maritime coastal zone; throughout time (i.e. low and high tide, storm...) a certain area can be flooded partly or totally. Man has to adapt his lifestyle to the unpredictable, temporary flooding of the land.

Fig.2e) Image of EU network: maritime cargo transport network in 2070: introduction of 'Intermediary Hub Terminals'

Fig.2f) Image of renewable energy transport network in a low-carbon Europe 2070 North Sea area

Fig. 2g) Longitudinal section: recalibration of the coastal urbanization and the connection between the land-sea zone and the sea zone, anno 2070.

figure 2 a

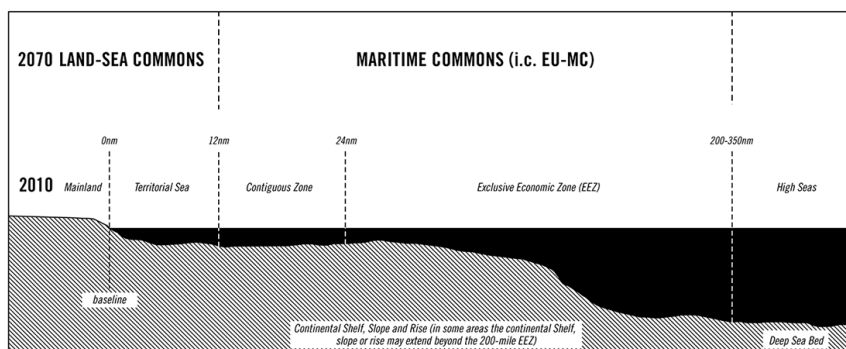


figure 2 b



figure 2 c



figure 2 d



figure 2 e, 2 f

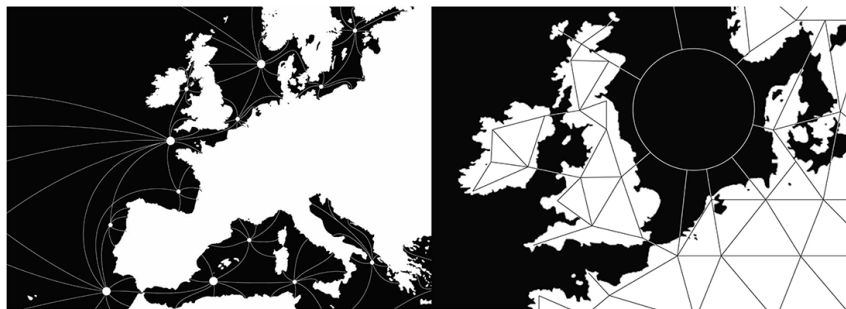


figure 2 g



7. The Future Commons 2070: critical projection as vision-forming research

Marine spatial planning is still in its infancy and it is early days now to evaluate the direction it is taken. Probably strengths and weaknesses of commons-based marine spatial planning will be put to test quickly when the next requests for concessions pop up and it is likely that only when new constructions on sea or operations of land reclamation are already constructed that a sharpened discussion on their common character will emerge. Will a plea to establish these constructions as common good come to late then?

The purpose of a project like 'The Future Commons 2070' is to anticipate a reality-to-come by means of creating critical projections of a possible future scenario. All kinds of questions emerge here: Is there room and an open, critical state of mind to embrace such commons-based marine spatial planning? Does the juridical format of a domain-concession offer sufficient guarantee to ensure the 'not-to-be-appropriate' status or do we have to develop other juridical instruments? What if an atoll for energy storage is built on sea? How then could we safeguard its common character in the long run? Are we really ready for 'green growth'? Such questions touch the very fundamentals of existing (socio-economic and hence, planning) systems and their detrimental impact on the sustainable development we envision. It has become clear that this widely advocated sustainable development cannot be obtained by mere technological solutions, political regulation or financial instruments. It requires a profound change in both our thinking and acting. Critical projections like 'The Future Commons 2070' help to make such fundamental transitions both thinkable and imaginable. Such projects belong to a branch of research by design which is called 'projective research'. Here the power of projective and anticipative imagination of designerly thinking is used as the driving force of research (Janssens 2012). This type of research is used in contexts of systemic changes (economic, ecological, political...) to learn from the future and to indicate a directions for change by revising and repositioning the basic values on which a socio-spatial vision of our world can be built. Projective research by means of critical projections of a possible future also plays an important role to sensitize and increase support of broader parts of society. It provides a frame to stay in touch with the evolutions at stake and to detect important points of attention. In this respect, we have noticed that the spatial vision the 'Future Commons 2070' formulated has a certain impact within the emerging marine spatial planning in Belgium. Trans-border themes like energy production, shipping and harbor development, coastal development, and measures for mitigation adaptation in the light of climate change are part of this policy development and the offer keys to several design exercises for the new European spatial condition. Certain terms that typify the sea are getting cautiously incorporated in marine spatial plans, for instance: 'not-to-be-appropriated' and 'four dimensional space'. Whether also the terms 'common good' and 'common pool resource' will be adopted remains to be seen. Europe today is also very careful when it comes to introducing marine spatial planning and currently only does so in combination with integrated coastal zone management. A thorough spatial reorganization of the borders will only make it to the top of the agenda if some 'emergence' happens. Although the concept is maturing, we are still far from an established EU-marine commons. The stakes here are enormous and the complexity of the problems is hard to grasp. A ready-made solution is therefore not the issue here, so much the more is a continuous and evolving effort to formulate a critical vision on this mainly ethical issue. Critical projections that develop (planning) concepts, values and their spatial translation, play a so far underestimated activating role in helping developing a favorable state of mind. The experience with the 'Future Commons 2070' project learns us that the power of such a critical, synthetic and (scientifically) well informed image of the future does indeed has an impact on the present.

References:

- Barnes, P. (2006), *Capitalism 3.0. A guide to reclaiming the commons*, San Francisco, Berret-Koehler Publishers.
- De Rynck, F., Voets, J., (2007) "De zee besturen: the tragedy of a common?", In: *Achtergrond 03 -Architect/Ontwerper/Onderzoeker? Casus Mare Meum: een oefening op de zee*, Antwerpen, Vlaams architectuur Instituut, pp. 53-60
- Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu (2014a), *Koninklijk Besluit van 20 maart 2014 tot vaststelling van het marien ruimtelijk plan en Bijlagen, Bijlage 1 Ruimtelijke Analyse van de zeegebieden*, Brussel, p161.
- Federale Overheidsdienst Volksgezondheid, Veiligheid van de Voedselketen en Leefmilieu (2014b), *Koninklijk Besluit van 20 maart 2014 tot vaststelling van het marien ruimtelijk plan en Bijlagen, Questions and comments public consultation 2013 with answers annex 1*, Brussel, p22-23
- Geldof, Ch. (2009) "Ruimtelijke planning op Zee!?? Met de Zee mee? over het hoe en waarom", In: Bouma, G., Filius, F., Leinfelder, H., et al. (eds.) *Tussen Droom en Werkelijkheid, Gebundelde papers en ontwerpogaven, plandag*, 2009 May 7, Brussel. pp. 483-496
- Geldof, Ch., Janssens, N., Goossens, C., Goris, E., Dagmar, P., Labarque, P. (2011) *The future commons 2070, Map C01 Harwich to Hoek van Holland and Dover Strait*, Ghent, magnificentsurroundings.org
- Geldof, Ch., Janssens, N. (2014) " The future commons 2070. Van Harwich tot Hoek van Holland. Een pleidooi voor respect voor de commons in mariene ruimtelijke planning en kustzone planning en beheer." In: *Ruimte*, nr 22, jrg 6: in press
- Janssens, N. (2012) *Utopia-driven Projective Research. A design approach to explore the theory and practice of Meta-Urbanism*. Doctoral dissertation, Department of Architecture, Chalmers University of Technology.
- Kolman, R (2012)" New land in the water. Economically socially landreclamation pays." In: *Terre et Aqua*, nr 128 (September) , The Hague, p 3-8
- Ostrom, E. (1990) *Governing the Commons. The Evolution of Institutions for Collective Action*, Cambridge, Cambridge University Press.
- Unesco United Nations Educational Scientific Cultural Organization (2012) Healthy Ocean Healthy people Knowing our ocean, protecting our marine treasures, empowering ocean citizens (UNESCO 2010); consulted on 13.04.2014
<http://unesdoc.unesco.org/images/0021/002166/216651e.pdf>